We claim:

1. An optical element, comprising:

(a) a viscoelastic host material;

(b) a dopant inside the viscoelastic host material;

(c) a nonuniform concentration distribution of the dopant inside the viscoelastic host material; and,

(d) regions of different stiffness within the viscoelastic host material.

2. The optical element according to claim 1, wherein the concentration of dopant increases toward the center of the viscoelastic host material.

3. The optical element according to claim 1, wherein the concentration of dopant increases toward a preselected focal region inside the viscoelastic host material.

4. The optical element according to claim 1, further comprising a gradient stiffness distribution within the viscoelastic host material.

5. The optical element according to claim 4, wherein the stiffness decreases toward a preselected focal region inside the viscoelastic host material.

6. The optical element according to claim 5, wherein the concentration of the dopant increases toward regions of lesser stiffness.

7. The optical element according to claim 1, wherein the dopant is a nonlinear absorbing chromophore.

8. The optical element according to claim 7, wherein the non-linear absorbing chromophore is copper phthalocyanine.

9. The optical element according to claim 1, wherein the dopant is silicon (IV) 2,3-naphthalocyanine bis(trihexylsilyloxide).

10. The optical element according to claim 1, wherein the viscoelastic host material is an epoxy resin.

11. A method for making an optical element, comprising the steps of:

(a) providing a viscoelastic host material having a nonuniform stiffness distribution; and,

(b) doping the viscoelastic host material with a dopant such that there is a nonuniform concentration distribution of the dopant inside the viscoelastic host material.

12. An optical element, comprising:

(a) a first outer layer of a crosslinked polymer host material of a first stiffness, the first outer layer not including a dopant;

(b) a first inner layer of a low crosslink density crosslinked polymer host material next to the first outer layer, the first inner layer having a stiffness less than the first outer layer and including a dopant;

(c) a second inner layer of a low crosslink density crosslinked polymer host material next to the first inner

layer, the second inner layer having a stiffness less than the first inner layer and including a dopant; and,

(d) a second outer layer of a crosslinked polymer host material next to the second inner layer, the second outer layer having the same stiffness as the first outer layer, and the second outer layer not including a dopant.

13. An optical element, comprising a plurality of layers of crosslinked polymer host material, wherein the stiffness of successive layers decreases from layer to layer from the outermost layers to the innermost layers and wherein a plurality of inner layers are doped with a dopant such that the amount of doping successively increases from layer to layer from the outermost of the inner layers to more innermost layers.

14. A method for limiting the transmission of electromagnetic energy, comprising placing in the path of the electromagnetic energy an optical element comprising a crosslinked polymer host material having a dopant within the crosslinked polymer host material; a nonuniform concentration distribution of the optical limiting dopant within the crosslinked polymer host material; and, regions of different stiffnesses within the crosslinked polymer host material.

15. The method for limiting the transmission of electromagnetic energy according to claim 14, wherein the concentration of dopant increases toward the center of the crosslinked polymer host material.

16. The method for limiting the transmission of electromagnetic energy according to claim 15, wherein the stiffness of the crosslinked polymer host material decreases toward a preselected focal region inside the crosslinked polymer host material.

17. The method for limiting the transmission of electromagnetic energy according to claim 15, wherein the concentration of dopant increases toward regions of lesser stiffness.